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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/669,042 | 09/25/2000 | Christoph Widmer | 32992 | 2828 |

116 7590 09/11/2003
PEARNE & GORDON LLP
526 SUPERIOR AVENUE EAST
SUITE 1200
CLEVELAND, OH 44114-1484

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| EXAMINER |
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MICHALSKI, JUSTIN I

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| ART UNIT | PAPER NUMBER |
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2644

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DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/669,042

Applicant(s)

WIDMER ET AL.

Examiner

Justin Michalski

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2000.
- 2a) ☐ This action is FINAL.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 and 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed December 3, 2001 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
3. The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

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4. The disclosure is objected to because of the following informalities: Claims must start with "I (or we) claim," "The invention claimed is" (or the equivalent). See MPEP 608.01(m). Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "two of the signal-carrying channels" in lines 2 and 3 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Ward (US Patent 4,811,402).

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Regarding Claim 1, Ward discloses a custom-molded ear-plug device (Figure 2) with at least one acousto-electric converter (transducer 11) or at least one electro-acoustic converter (transducer 13) having an acoustic input or output connected via an acoustic conductor (acoustic conductor 15) to a coupling port on an outer surface of the custom-moulded ear-plug shell (end of conductor 15 and ear-plug device), characterized in that the said acoustic conductor is in the form of a channel extending through, and bounded by, material of the custom-moulded ear-plug shell.

Regarding Claim 4, Ward discloses a device as stated above apropos of Claim 1. Ward further discloses for a substantial segment of its length the channel extends essentially parallel to the outer surface of the custom-molded ear-plug device (Figure 4, Channel 15 extends parallel to top portion of earplug device).

Regarding Claim 5, Ward discloses a device as stated above apropos of Claim 1. Ward further discloses the device characterized in that the custom-molded ear-plug device is a hearing aid (Column 3, lines 17-20).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ward as applied to claim 1 above in view of Johnson (US Patent 4,311,206).

Regarding Claim 2, Ward discloses a custom-moulded ear-plug device as stated above apropos of Claim 1. Ward does not disclose the channel features varying in cross-sectional dimensions or shapes. Johnson discloses an ear-plug device (Figure 5) with a channel used for acoustic conduction (references 54) varying in cross-sectional dimensions over the length of the ear-plug device. Johnson teaches the shape provides a resonance system that will resonate at selected frequencies when acoustic energy is applied. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the hearing aid disclosed by Ward with the varying cross-sectional channel as disclosed by Johnson in order to produce a more customized audio output.

Regarding Claim 3, Ward discloses a custom-moulded ear-plug device as stated above apropos of Claim 1. Ward does not disclose a matching stub for tuning the acoustic transmission properties. Johnson further discloses a matching stub line (line 54) serving for the tuning of the acoustic transmission properties which extends into channel (channel 54 and 46) and is bounded by the material of the custom-moulded ear-plug shell. Johnson teaches the shape provides a resonance system that will resonate at selected frequencies when acoustic energy is applied. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the hearing aid disclosed by Ward with a matching stub for tuning acoustic properties as disclosed by Johnson in order to produce a more customized audio output.

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11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ward as applied to claim 2 in view of French (US Patent 1,830,198). Ward discloses a custom-moulded ear-plug device as stated above apropos of Claim 1. Ward discloses the device as an in-ear hearing aid (Column 3, lines 17-20) but does not disclose the channel as part of a venting system for the ear drum. French discloses an ear receiver nipple (Figures 4 and 5) including a channel (channel G) for passing acoustic energy. French discloses a venting system comprising channels G and M to keep pressure from building up in the ear channel (Page 1, Line 62-72). French also teaches a device lacking a venting system would cause irregular compression of the air in the ear channel preventing proper reception and interpretation of auditory sounds (Page 1, Lines 53-56). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to combine the channel as part of a venting system for the ear drum with the hearing aid disclosed by Ward in order to keep pressure from building up in the ear channel and allowing proper reception.

12. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ward as applied to claim 1 above in view of Saltykov (PCT WO 0038477). Ward discloses a custom-moulded ear-plug device as stated above apropos of Claim 1. Ward does not disclose a segment of at least two of the signal-carrying channels extending in parallel fashion. Saltykov discloses a dual-input hearing aid where ports (i.e. channels) (Figure 2, 16-1' and 16-2') carry acoustic energy to microphone 10 in a parallel fashion for a certain segment). Saltykov discloses two channels carrying acoustic energy can give a sense of directionality (Page 1, paragraph 3-4). Therefore, it would have been obvious to one skilled in the art at

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the time the invention was made to include a second signal-carrying channel in order to enhance and obtain a clearer the audio signal produced by the device.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sciarra (US Patent 4,539,440). Sciarra discloses a hearing aid with a varying diameter channel.

Bordewijk (PCT WO94/10818). Bordewijk discloses a hearing aid with acousto-electric converter and parallel channel.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (703)305-5598. The examiner can normally be reached on M-F 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Isen can be reached on (703)305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

JIM


XU MEI
PRIMARY EXAMINER